

REMARKS

Claims 2-5 and 8-10 are canceled without prejudice, and Claims 1, 11-13 and 17-19 are amended, leaving Claims 1, 6-7, and 11-22 for consideration upon the entry of the amendment. No new matter has been entered by the amendments.

Election/Restrictions

Applicant respectfully affirms the election of Group III, Claims 1, 6-7, and 11-22, in response to the restriction to the present application.

Specification Objections:

The disclosure is objected to because of informalities on page 9, paragraph 30. The Examiner has stated that the value for F3 given in line 4 is not the same as the value given in line 5. The value for F3 given in line 4 of paragraph 30 is corrected to the value "2.75".

The Examiner has also stated that the formula on line 4 also does not seem to agree with the formula on line 3. Applicant respectfully submits that the formula on line 4 agrees with the formula on line 3, because $(F1 + F2)/2$ is $\{[(\Delta X1 + \Delta X2 + \dots + \Delta X_{n-1})/(n-1)] + [(\Delta Y1 + \Delta Y2 + \dots + \Delta Y_{n-1})/(n-1)]\}/2$, and $\{[(\Delta X1 + \Delta X2 + \dots + \Delta X_{n-1})/(n-1)] + [(\Delta Y1 + \Delta Y2 + \dots + \Delta Y_{n-1})/(n-1)]\}/2$ is $(\Delta X1 + \Delta Y1 + \Delta X2 + \Delta Y2 + \dots + \Delta X_{n-1} + \Delta Y_{n-1})/(2(n-1))$. Withdrawal of the specification objection is respectfully requested.

Claim Rejections Under - 35 USC § 112

Claims 11-22 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention. The symbols " ΔX_{n-1} " and " ΔY_{n-1} " in formula of Claims 11-13 and 17-19 are corrected to recite the symbols " $\Delta X_{(n-1)}$ " and " $\Delta Y_{(n-1)}$ ".

Therefore, Claims 11-22 are believed to comply with the requirement of 35 U.S.C. 112, second paragraph. Withdrawal of the claim rejection is respectfully requested.

Claim Rejections Under - 35 USC § 103

Claims 1, 6-7, and 11-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swift et al., US 5,719,941 (hereinafter "Swift") in view of IBM Technical Disclosure Bulletin ("Passphrase Filter for Detection/Rejection of Weak User-Selected Passphrases) (hereinafter "IBM"). Applicant respectfully traverses the rejections.

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing that all elements of the invention are disclosed in the prior art; and that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970). Neither Swift nor IBM teaches or suggests all elements of independent Claims 1, 11, and 17 for at least the reasons stated below.

Regarding Claim 1, the Examiner has stated on page 5 of the Office Action that Swift does not disclose a database including a keyboard profile wherein said keyboard profile specifies a physical layout of characters and function keys on said keyboard input device; however, such a limitation is disclosed by IBM. Applicant respectfully disagrees with the Examiner.

Page 96, the second paragraph of IBM teaches that the cryptographic facility access program 4 contains a passphrase filter utility program 6 accessed via a CFAP macro called Check Passphrase 7. Page 97, the second paragraph of IBM also teaches that one way to detect numerical or alphabetic order is to assign a rank number to each numeral and letter and use the method of the calculate of finite difference; and the method is the one used to calculate the degree of a polynomial with passes through a finite number of specified points. Therefore, IBM teaches a method for the detection/rejection of weak user selected passphrases in which a rank number is assigned to each numeral and letter by using the Check Passphrase macro 7. IBM however, is silent in specifying the keyboard profile with a physical layout of character

and function keys. Thus, IBM fails to teach or suggest the feature “a database including a keyboard profile wherein said keyboard profile specifies a physical layout of character and function keys on said computer keyboard input device”, as recited in Claim 1.

Because Swift in view of IBM fails to teach or suggest all elements of Claim 1, Swift in view of IBM does not render Claim 1 obvious. Claims 6-7 depend from Claim 1, and thus are patentable over Swift in view of IBM due to their dependency on Claim 1.

Regarding Claim 11, the Examiner has stated on page 9 that in the pattern analysis method disclosed by IBM, each number and letter key on the keyboard is assigned a rank number from 1-36; and that this reads on the limitation of a keyboard profile. Applicant respectfully disagrees with the Examiner.

The algorithm as recited in Claim 11 calculates absolute value $\Delta X1$ of a difference between a first and a second data coordinate on the X axis of the keyboard profile. Therefore, the absolute value $\Delta X1$ is calculated by using the data coordinate of characters of proposed password on the X axis of the keyboard profile.

In contrast, page 97, numeral numbers 1 and 2 of IBM teach that the numerals zero through nine are assigned a rank number from 1 to 10 and the letters “A” through “Z” are assigned a rank number from 11 to 36; and generate a list of the rank numbers for the passphrase. Therefore, the rank number from 1 to 10 are assigned to the letters by using standard statistical analysis of the trial passphrase, but the assignment of the ranking is not relevant with the data coordinate of characters of the password on the X axis of the keyboard profile. Accordingly, IBM fails to teach or suggest the element “performing an algorithm on said proposed password, said algorithm including a first formula, comprising: $(\Delta X1 + \Delta X2 + \dots + \Delta X_{(n-1)}) / (n - 1) > 0$; wherein: X represents data coordinate of each character of said proposed password on an X axis of the keyboard profile; n represents a number of the characters comprising said proposed password; and $\Delta X1$ represents an absolute value of a difference between a first and second data coordinate on said X axis; and wherein further data

coordinates are plugged into said first formula for determining vertical triviality", as recited in Claim 11.

Swift in view of IBM does not render Claim 11 obvious, because it fails to teach or suggest all elements of Claim 11. Since it contains similar elements, Claim 17 is patentable over Swift in view of IBM. Claims 12-16 depend from Claim 11 and Claims 18-22 depend from Claim 17. Therefore, these dependent claims are patentable over Swift in view of IBM due to their dependency on Claims 11 and 18, respectively.

In view of the foregoing, it is respectfully submitted that the instant application is in condition for allowance. Accordingly, it is respectfully requested that this application be allowed and a Notice of Allowance issued. If the Examiner believes that a telephone conference with Applicant's attorneys would be advantageous to the disposition of this case, the Examiner is cordially requested to telephone the undersigned.

In the event the Commissioner of Patents and Trademarks deems additional fees to be due in connection with this application, Applicant's attorney hereby authorizes that such fee be charged to Deposit Account No. 09-0463.

Respectfully submitted,

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